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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,272	09/15/2003	Lelia Cosimbescu	85025AEK	9023

7590 08/28/2006

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EXAMINER

GARRETT, DAWN L

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 08/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/662,272

Applicant(s)

COSIMBESCU ET AL.

Examiner

Dawn Garrett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-22 is/are pending in the application.
- 4a) Of the above claim(s) 11,13 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-10,12,14 and 16-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

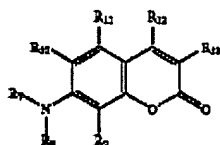
Response to Amendment

1. This Office action is responsive to the amendment mailed June 14, 2006. Claims 1 and 3 have been amended. Claim 2 is cancelled. Claims 11, 13 and 15 are withdrawn as non-elected.

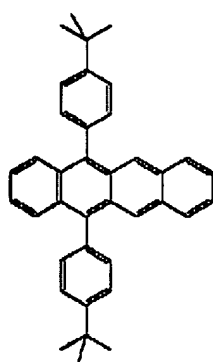
2. The species under consideration remain as the following:

Host: Aluminum trisoxine alone

First Dopant: Formula 2



Second Dopant: Inv-1b



Inv-1b

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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4. Claims 1, 3-10, 12, 14, and 16-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification is not enabling to one of ordinary skill in the art to select a second, stabilizing dopant for a device emitting absolutely no light. It is noted that all of the stabilizing dopants specifically described by applicant in the examples actually show a shift in C.I.E. coordinates when incorporated into a device at preferred concentration levels and accordingly, none show emission of absolutely no light as claimed. The coordinate shift shows there is actually some emission by the stabilizing dopants, because the examples show that everything else in the device remains constant in the comparison embodiments. In light of applicant's definition and description of stabilizing dopants in the present specification, applicant appears to be actually claiming a device comprising two dopants wherein at least one of said dopants is at a low concentration. The specification is not enabling to one of ordinary skill in the art to select a second, stabilizing dopant for a device emitting absolutely no light.

Claim Rejections - 35 USC § 103

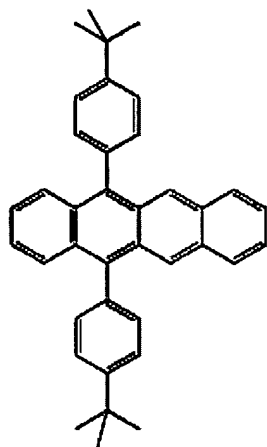
5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3-10, 12, 14, and 16-22 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Nakaya et al. (US 6,203,933) in view of Tang et al. (US 4,769,292). Nakaya

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et al. teaches organic EL elements comprising light emitting layers including a host material such as aluminum complexes having 8-quinolinol as a ligand with regard to the host material aluminum trisoxine (see col. 33, lines 43-48 and 17-28) (“host”). At least one compound according to the Nakaya et al. formula (I) is contained in the light emitting layer in an amount of at least 0.1% by weight (see col. 33, lines 29-31) (“second dopant”). The specific formula (I) compound



is taught at col. 11-12 (bottom half of page), compound “1-4”. Nakaya et al. further teaches “the light emitting layer may additionally contain another luminescent material in addition to the compound of the general formula (I)” such as those “disclosed in JP 264692/1998” (see col. 33, lines 15-19) (“first dopant”). A patent family equivalent of JP 264692/1998 is Tang et al. (US 4,769,292), which teaches fluorescent coumarin dyes as dopants (see col. 11, line 31 and following). It would have been obvious to one of ordinary skill in the art at the time of the invention to have selected the coumarin dye as an additional luminescent component for the light emitting layer, because Nakaya et al. discloses dyes such as those taught in JP 264692/1998 are suitable and Tang et al. teaches in the U.S. patent equivalent of JP 264692/1998 that coumarin

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dyes are suitable dopants. A *prima facie* case for combining the host, first dopant, and second dopant has been established and since each of the three materials are the same as applicant's materials, the emission properties of claims 1 and 3 are considered to be inherent. With regard to the dopant amounts, the Nakaya et al. formula (I) compound is used in an amount of preferably 0.01-20% weight (see col. 33, lines 38-39). The secondary reference teaches the coumarin dye dopants are incorporated into light emitting layers in amounts within the ranges of claims 4-6 (see Tables, col. 35). In addition, it would have been obvious to one of ordinary skill in the art to have included the "additional luminescent component" ("first dopant") in a similar amount as the formula (I) compound ("second dopant"), because one would expect the additional luminescent component to be similarly incorporated into the device and to perform a similar function as the specifically mention formula (I) luminescent component.

Response to Arguments

7. Applicant's arguments filed June 14, 2006 have been fully considered but they are not persuasive.

Applicant states "It is believed that the amended claim 1 clearly distinguishes over the cited art. The references employ some standard boilerplate that suggests the possibility of two or more emitting dopants. They do not provide any reason to include a second dopant of the type claimed herein that does not emit. There is no suggestion in the art of the stabilizing effects achieved by dopant 2 of the claims."

The examiner submits the prior art references teach dopants in the same amounts as those set forth by applicant as non-emitting. Accordingly, dopants used in the same concentrations would inherently have the same emission properties and stability properties. It is noted that

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dopants described by applicant as stabilizing, non-emitting dopants actually show a shift in C.I.E. coordinates when incorporated into a device at preferred concentration levels (see specification Examples). The coordinate shift shows there is actually some emission by the stabilizing dopants, because the examples show that everything else in the device remains constant in the comparison embodiments. In light of applicant's definition and description of stabilizing dopants in the present specification, applicant appears to be actually claiming a device comprising two dopants wherein at least one of said dopants is at a low concentration. The applied references teach dopants used at the same low concentrations.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (571) 272-1523. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached at (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DAWN GARRETT
PRIMARY EXAMINER

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